

REMARKS

Claims 1-2 and 8-13 remain pending in this application. New claims 19-21 have been added. Claims 3-6, 7, and 14-18, have been canceled without prejudice or disclaimer. Claims 1-2 and 10-13 have been withdrawn from consideration as being drawn to a non-elected invention.

Claim 8 has been amended to require that each of the at least four polynucleotides have a different "known" length. Support for this amendment is found at page 11, lines 16-17, of the specification. Claim 9 has been amended to recite "at least four" prior to "polynucleotides." New claims 19-21 have been added to further define the invention. Support for amended claim 9 and new claims 19-21, appears throughout the specification and claims as originally filed. For example, please see the specification at page 12, lines 1-3. No new matter has been added.

Reconsideration and continued examination of the present application are respectfully requested.

Although Applicants have elected claims 8-9 for further examination on the merits, Applicants respectfully submit that Group I, covering claims 1-2 drawn to a method to calibrate a multi-channel fluorescent polynucleotide separation apparatus, and Group V, covering claims 10-13 drawn to a method to monitor a separation channel of a fluorescent polynucleotide separation apparatus, should all be considered and examined along with the elected claims 8 and 9 of Group IV, because all of the claims in the above-referenced groups are classified in class 204, subclass 452. Consolidation and examination of the claims in Groups I, IV, and V would not place an undue burden on the patent office and would avoid unnecessary duplicative examination by the Examiner as well as unnecessary expense to the Applicants. Accordingly, Applicants respectfully request that at least claims 1-2 and 8-13 be considered and examined at this time.

I. Claims 8 and 9 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Smith et al. (U.S. Patent No. 5,747,249). The Examiner alleges that Smith et al. meets the limitations of claims eight and nine. In view of the following, this rejection is respectfully overcome.

Independent claim 8 has been amended to require that each of the at least four polynucleotides have a different, known, length. More specifically, amended claim 8 is directed to a calibration standard for a fluorescent polynucleotide separation apparatus, wherein the standard comprises at least four polynucleotides each having a different length and each being labeled with a different fluorescent dye having a distinctive spectral profile having a peak, wherein the lengths of the polynucleotides differ from one another such that, upon electrophoretic separation, the peak of the spectral profile of any one of the dyes does not significantly overlap the peak of the spectral profile of any of the other dyes.

Claim 9 is dependent on claim 8 and further requires that the fluorescently labeled at least four polynucleotides in the standard are separated by at least 10 bases in length.

Smith et al. '249 is relied upon for describing a method for separating and detecting tagged polynucleotides. Smith et al. describes a process for the electrophoretic analysis of DNA fragments produced in DNA sequencing operations where chromophores or fluorophores are used to tag the DNA fragments produced and permit the detection and characterization of the produced fragments as they are resolved by electrophoresis through a gel. Applicants respectfully submit that Smith et al. does not teach polynucleotide fragments having a *known* length, as required by amended claim 8. Rather, Smith et al. describes a method for sequencing nucleic acid, where a mixture of labeled DNA fragments of *unknown* lengths is produced.

Accordingly, it is submitted that Smith et al. does not teach each and every element of the claimed invention as required for anticipation under 35 U.S.C. § 102. Thus, the Examiner is respectfully requested to withdraw this rejection.

II. Claims 8 and 9 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Ansorge et al. (U.S. Patent No. 5,912,118).

The Examiner alleges that Ansorge et al. meets the limitations of claims 8 and 9. In view of the following this rejection is respectfully overcome.

Ansorge et al. discloses a method for sequencing nucleic acid including the steps of separating labeled nucleic acid fragments according to size, and determining the nucleic acid sequence.

Applicants respectfully submit that Ansorge et al. does not disclose labeling at least four different nucleic acid fragments with a different fluorescent dye, each fragment having a *known* length, as required by amended claim 8. Rather, Ansorge et al. discloses a method for sequencing nucleic acid, where a mixture of labeled nucleic acid fragments of *unknown* lengths, are produced. The fragments are then separated according to size and the sequence is determined via labeling of the individual fragments.

Accordingly, it is submitted that Ansorge et al. does not teach each and every element of the claimed invention as required for anticipation under 35 U.S.C. § 102. Thus, the Examiner is respectfully requested to withdraw this rejection.

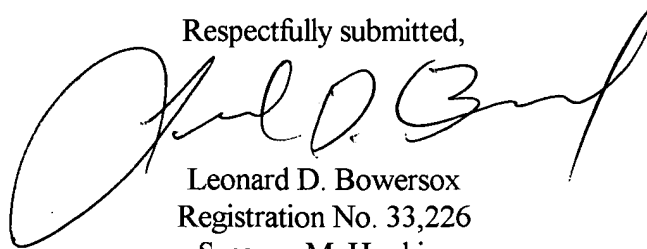
CONCLUSION

In view of the foregoing remarks, Applicants respectfully request favorable reconsideration of the present application and a timely allowance of the pending claims. Regarding new claims 19-21, these claims are each dependent on amended claim 8 and thus, should be allowed for the reasons discussed above in reference to the rejections of claims 8 and 9.

Should the Examiner deem that any further action by Applicants or Applicants' undersigned representative is desirable and/or necessary, the Examiner is invited to telephone the undersigned at the number set forth below.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,

A large, stylized handwritten signature in black ink, appearing to read 'Leonard D. Bowersox', is written over the typed name and registration number.

Leonard D. Bowersox
Registration No. 33,226
Susanne M. Hopkins
Registration No. 33,246

KILYK & BOWERSOX, P.L.L.C.
3603-E Chain Bridge Road
Fairfax, Virginia 22030
Tel.: (703) 385-9688
Fax.: (703) 385-9719